

### ABSTRACT OF THE DISCLOSURE

The invention provides a method of detecting myocardial ischemia in a human or a non-human body, said method comprising administering to said body a physiologically acceptable manganese complex or salt thereof, subjecting said body to a magnetic resonance imaging procedure capable of generating images with time intervals of less than 0.5 seconds and thereafter providing a series of images of the myocardium of said body whereby to identify regions of abnormal blood flow. The method in accordance with the invention is of use not only in detecting myocardial ischemia, but also in discriminating between reversibly and irreversibly injured myocardial tissues, thereby providing important information about myocardial viability, e.g. during or following a severe heart attack or coronary occlusion. The method of the invention also provides an effective means of monitoring reperfusion of the myocardium.